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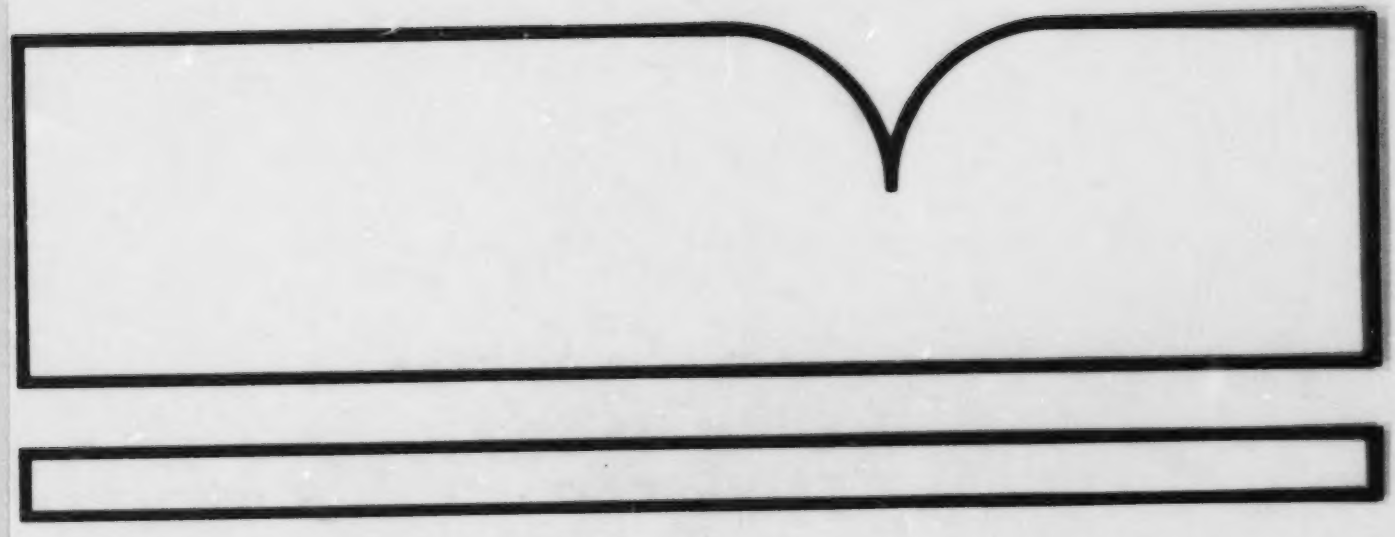

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In providing Federal funds for the construction of certain treatment facilities, the Act requires that the parties to this undertaking follow a series of steps designed to insure that the best possible project results from the time, effort and money expended.

This handbook has been prepared to assist municipal officials in this effort. It contains a summary of the requirements of the Construction Grants Program and the responsibilities that each participant bears, omitting much of the detail. For that reason, applicants are urged to establish and maintain ongoing contracts with their consultants and the State and Federal agencies administering water pollution control programs.

The first edition of this handbook was published in May, 1976, took into account laws, regulations and policy in effect as of July 1, 1975. The Clean Water Act of 1977 mandated significant changes in the conduct of the Construction Grants Program necessitating the publication of this second edition.

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Foreword

The community which applies for construction grant funds is participating in the massive program of water pollution control and abatement to which this Nation committed itself with the passage of the Federal Water Pollution Control Act of 1972 (Public Law 92-500). This legislation, however wide-ranging, has as its central theme the importance of cooperation among local, State and Federal agencies charged with the responsibility for restoring and preserving the quality of our Nation's waters. In building and operating sewage treatment facilities, localities are fulfilling their responsibility under this Act.

In providing Federal funds for the construction of certain treatment facilities, the Act requires that the parties to this undertaking follow a series of steps designed to insure that the best possible project results from the time, effort and money expended.

This handbook has been prepared to assist municipal officials in this effort. It contains a summary of the requirements of the Construction Grants Program and the responsibilities that each participant bears, omitting much of the detail. For that reason, applicants are urged to establish and maintain ongoing contracts with their consultants and the State and Federal agencies administering water pollution control programs. The more grantee officials understand and involve themselves in the grants process, the more likely the project they are pursuing will be planned, designed, built and operated with the least amount of disruption and to the satisfaction of all concerned.

Henry L. Longest II
Deputy Assistant Administrator
for Water Program Operations

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Introduction

This handbook was written to give public officials a little help in understanding the "in's and out's" and "do's and don'ts" involved in carrying out the Construction Grants Program. Municipal officials obviously have many on-going responsibilities over and above constructing a sewage treatment facility to keep them busy. To accommodate these officials, EPA has summarized the many regulations, guidelines, technical bulletins and policy statements which govern the Program in this relatively brief and concise handbook.

Although municipalities will retain a competent consultant to assist them with program details, the ultimate responsibility for project undertakings lies with the municipal official. The construction of a sewage treatment facility is a community enterprise and, while the professionals can do the work, it is the community which benefits and, of course, pays. Representatives of that community therefore need to know some of the "basics" involved in the program so that maximum benefits can be derived from the monies spent.

The information in this handbook will enable municipal officials to be more than "sidewalk superintendents." With it, they can ask questions which will help to insure that their consultants are doing the job they are paid to do and to assure that documents necessary for grant awards are started and completed with a minimum loss of time and effort.

The first section of the handbook is a summary of items which the applicant must know, do or arrange to be done. Included with these items are reference numbers which call attention to a more detailed discussion of the topic in the second section. The items are presented in chronological order, starting with project planning and continuing through final payment and audit.

The handbook does not cover every situation nor reference every pertinent regulation. It does, however, give responsible officials the background needed to become personally involved and to insure that their project moves freely through the grant process.

The first edition of this handbook was published in May, 1976, and took into account laws, regulations and policy in effect as of July 1, 1975. The Clean Water Act of 1977 mandated significant changes in the conduct of the Construction Grants Program necessitating the publication of this second edition.

Part I

A brief summary of information needed by local officials to obtain a construction grant from the Environmental Protection Agency to build wastewater treatment facilities.

1.0 Preapplication Information

NOTE: The following are items of general information which need to be understood before applying for a grant.

ef.

1.1 Applicant Eligibility **8.1**

To be eligible for a construction grant the applicant must be a public body created under State law and meet a three-part test: (1) have as one of its principal responsibilities the treatment, transport, or disposal of liquid wastes of the general public in a particular geographic area; (2) have the legal authority to subsequently construct and manage the proposed facility; and (3) be the designated agency identified in an approved Water Quality Management (WQM) Plan (where applicable).

1.2 Types of Projects **8.2**

The following types of projects are eligible for an EPA grant of 75% of the allowable project costs.

a. **Sewage Treatment Plants**—new, expanded, upgraded. (Must provide at least secondary treatment.)

b. **Interceptor Sewers**—new or rehabilitated.

c. **Sewage Collection Systems**—new, expanded or rehabilitated, including pumping stations: the community must have been in existence before October 18, 1972.

d. **Small Alternative Wastewater Systems**—new, expanded or rehabilitated on-site systems (septic tanks or other sub-surface disposal systems) or other alternative collection systems serving principal residences, small commercial establishments or clusters of households.

e. **Combined Sewer Overflow Control Systems**—reducing, storing, treating, separating or disposing of wastewaters from combined storm and sanitary sewer systems.

Ref.

1.3 Priority List 8.3

Annually, each State is allotted a specific sum of money for construction grants. Projects are ranked in priority order by the States, on the basis of specific criteria, to determine which will receive these funds. An applicant's project must be on the State priority list to qualify for a grant.

1.4 Three Step Construction Grant Process 8.4

The construction grants process provides for funding projects in three steps—using three consecutive, but separate, grant projects:

Step 1—A grant under which preliminary planning and engineering ("Facilities Planning") is performed.

Step 2—A grant under which detailed plans and specifications are prepared.

Step 3—A grant under which the facilities are constructed.

Step 2+3—In the case of small communities, a single grant can be given to perform Steps 2 and 3.

1.5 Water Quality Management Plans 8.5

The applicant's project must conform with recommendations contained in a Water Quality Management (WQM) plan. A WQM plan is made up of a Basin Plan—which sets forth the level of treatment required by each sewage treatment plant in each drainage basin of the State; and, an Areawide Waste Treatment Management plan—which addresses, in addition to pollution problems from sewage treatment plants, population growth, storm water and agricultural runoff problems and other considerations necessary for a unified comprehensive approach toward abating water pollution.

1.6 Facilities Planning 8.6

The preparation of a facilities plan, sometimes called a 201 plan, is the first step (Step 1) in the construction grant process. Here the specific requirements of a planning area, defined by the State, is examined, the water pollution problem is identified, alternatives are evaluated and a solution is recommended. Public participation in the decision making process is required through public meetings.

1.7 Municipal NPDES Permits 8.7

Permits are issued by the States or EPA for existing or new waste discharges under the National Pollution Discharge Elimination System (NPDES). Meeting the treatment requirements and construction schedule specified in the permit frequently prompts a municipality to apply for a construction grant.

Ref.

1.8 Clearinghouse(s) **8.8**

The Federal Office of Management and Budget (OMB), in Circular A-95, requires that all projects being financed in whole or in part with Federal funds be reviewed by a central State and/or regional clearinghouse.

1.9 Preapplication Conference ..... **N/A**

To make certain that applicants clearly understand the requirements they must meet to obtain construction grants, a preapplication conference is held. At this conference, the roles of the consultant, the State and the EPA in the grant process are explained. Most preapplication conferences are conducted by the State; therefore, applicants should contact their State agency as soon as possible to arrange for one. (A listing of State Offices appears in the Appendix.)

As noted, the grant process for building sewage treatment facilities has three steps. The first step, which is very involved, will be discussed in considerable detail at the conference. Requirements pertaining to a Step 1 project grant are summarized below.

2.0 Step 1 Application

NOTE: To apply for a Step 1 grant, the following items must be submitted to the State agency. Application forms and kits are available from the State and are usually furnished at the preapplication conference.

2.1 Plan of Study **9.1**

A brief description is given of the scope of work to be undertaken in planning the project, including problem areas and issues to be resolved. Also, itemized costs of preparation must be shown and a work schedule must be included. The public is to be notified and consulted during the development of a plan of study.

2.2 Clearinghouse Comments **8.8**

Comments concerning the proposed project are to be obtained from the State and/or regional clearinghouse in accordance with paragraphs 1.8 above and 8.8 below.

2.3 Application, EPA Form 5700-32 ..... **9.2**

Instructions for completing the application are printed on the form. Part II-Section B, site information, is not required for a Step 1 grant. Part V, Assurances, should be read carefully. A resolution authorizing the official representative (Mayor, Councilman, etc.) to act on behalf of the applicant must be included with the submission.

Ref.

2.4 Selection of Professional Engineer **9.3**

Copies of proposed contracts, or an explanation of how contracts for professional services will be awarded, must be submitted to EPA for review. Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) goals must be considered.

NOTE: The application and accompanying documents must be reviewed and approved by both the State agency and EPA. DO NOT proceed with any work on the project until written approval to do so is received from EPA or the State. No payment may be made for work undertaken without this approval. Applicants will be notified in writing when a grant is approved and instructions will be provided as to procedures for accepting the grant and executing the Grant Agreement (EPA Form 5700-20). The executed Grant Agreement constitutes a contractual obligation between the Federal government and the grantee.

Each Federally assisted project is subject to audit; therefore, it is important that accurate financial records be kept. These records must clearly identify all costs pertaining to the EPA grant assisted project, must cover all funds received and disbursed, must distinguish between allowable and nonallowable project costs, and must be made available to EPA upon request.

Similarly, engineering consultants are required to maintain accurate records identifying project costs claimed for Federal participation.

3.0 Step 1 Facilities Planning

NOTE: After receiving a Step 1 grant, the grantee begins to prepare a facilities plan as prescribed in the law and Federal regulations. Key elements of this plan are listed below.

3.1 Discharge (Effluent) Limitations **10.1**

The State or EPA establishes the level of treatment necessary for each project and designates the type and quantity of pollutants which may be discharged to a stream or applied to the land.

3.2 Existing and Future Situations ..... **N/A**

The plan must describe the existing planning/service area and forecast what the area will be like in the future.

3.3 Alternatives **10.2**

Once the size and scope of the water pollution problem is defined, the plan must show the various solutions to the problem with an evaluation of each alternative. *All* costs impacting the average citizen should be itemized for each alternative.

Ref.

3.4 Innovative and Alternative Technology **10.3**

In addition to evaluating conventional forms of sewage treatment, innovative and alternative (I & A) forms of treatment (which reclaim, recycle or reuse sludge or effluent; reduce costs or energy) must also be evaluated. Grants may be increased to 85% of the Federal share where an innovative or alternative process is used.

3.5 Municipal Pretreatment Program **10.4**

For projects which will treat both domestic and industrial wastewater, a program must be established to insure that industrial wastes are adequately treated by the producing industries *before* being discharged into the municipal system. The cost of constructing capacity to treat, store or convey industrial wastewater from large dischargers will not be eligible for Step 3 grant assistance after November 15, 1981.

3.6 Infiltration Inflow (I/I) Analysis **10.5**

For projects with existing sewers, the plan must show the amounts of groundwater (infiltration) or stormwater (inflow) leaking into the sewer system and how much of this leakage can be eliminated economically.

3.7 Sewer System Evaluation Survey (SSES) **10.6**

In those cases where the infiltration/inflow analysis indicates excessive sewer leakage, investigations need to be carried out to locate the specific leaks and to estimate the cost of correction.

3.8 Environmental Evaluation **10.7**

As a part of the facilities plan, each alternative must be evaluated from an environmental standpoint. The environmental impact is weighed along with the engineering, financial, social and economic impacts of each alternative. Where conflicts exist, reasonable trade-offs are made.

3.9 Public Input **10.8**

An active public participation program must be held to obtain the public's view of the proposed project. When necessary, accommodating revisions to the proposed project are made.

3.10 Historical and Archaeological Investigations **10.9**

Federal and State laws require the protection of valuable historic and archaeological sites. Each State has a State Historic Preservation Officer (SHPO) who will assist in defining the limits of any historical or archaeological investigations required.

3.11 Selected Alternative **10.10**

After all the above factors are considered, one plan is selected and described in detail.

Ref.

3.12 Intermunicipal Agreements **10.11**

Where more than one municipality is to be served by the project, it will be necessary for the lead municipality to negotiate service agreements. Achieving agreement may be time consuming; therefore, such action should be initiated as early as possible. Service agreements must be drafted prior to the approval of the facilities plan and be completed before a Step 2 grant may be awarded.

NOTE: The completed facilities plan is submitted to the regional and/or State clearinghouse(s) for comments. If negative comments are received, an explanation must be given as to how the conflicts will be resolved. The completed facility plan and clearinghouse comments (and explanation if needed) are submitted to the State agency. DO NOT undertake additional project work until instructions to do so are received from EPA.

Grantees will be notified in writing of facility plan approval and will be given instructions for applying for a Step 2 grant.

Payments for work completed under the grant are to be requested, using EPA Form SF-271, in accordance with the payment schedule in the Grant Agreement. (See 13.9)

4.0 Step 2 Application

NOTE: The following items are necessary to apply for a Step 2 grant and are to be submitted to the State agency. For relatively small communities (population 25,000 or less) with small projects ($4 million or less), a combination Step 2+3 grant may be awarded with the intent of accelerating the grant process (see 8.4).

4.1 Facilities Plan **8.6**

An approved facilities plan, as described under Step 1, is required as a part of the Step 2 application. If it has already been approved by EPA, only a copy of the approval letter need be submitted.

4.2 Application, EPA Form 5700-32 ..... **9.2**

Each item should be completed in accordance with instructions. Of particular importance is the need to clearly explain the source of the local share of project costs (general taxes, sewer revenue funds, etc.). A copy of the resolution authorizing the official representative (Mayor, Councilman, etc.) to act on behalf of the applicant and a statement regarding availability of the proposed site, when applicable, must be attached.

4.3 Selection of Professional Engineer **9.3**

Copies of proposed contracts, or an explanation of how contracts for professional services will be awarded, must be included. Consideration must be given to MBE and WBE goals.

Ref.

4.4 Value Engineering **11.1**

Where construction costs are expected to exceed $10 million a value engineering analysis of the proposed project must be prepared concurrently with the project design.

4.5 Project Schedule ..... **N/A**

A project progress schedule identifying dates for project start, completion and significant milestones must be submitted as part of the application package.

4.6 User Charges **11.2**

Grantees are required to develop a user charge system, applicable to all users, fully covering the cost of operating and maintaining the treatment works. The system is to be developed during Step 2 and must be approved before a Step 3 grant can be awarded.

4.7 Treatment of Industrial Wastewater **11.3**

The cost of constructing capacity to treat, store or convey industrial wastewater from large industrial users is ineligible for grant assistance unless a Step 2 grant is awarded before May 15, 1980; or, a Step 3 grant is awarded before November 15, 1981. Therefore, when grantees receive Step 2 and Step 3 grants after these dates, their construction costs, which are attributable to building that part of their system which will accommodate discharges from large industries, are ineligible.

4.8 Sewer Use Ordinance **11.4**

A copy of existing sewer use ordinances, or a letter of intent that such ordinances will be enacted, are to be included. The ordinances must require new connections to be properly designed, constructed and free from stormwater flow.

4.9 Civil Rights Act of 1964 ..... **N/A**

EPA Form 4700-1, Assurance of Compliance, and EPA Form 4700-4, Compliance Report, are to be completed.

4.10 The Uniform Relocation and Land Acquisition Policies Act of 1970 ..... **11.5**

If the project will require the acquisition of private property or the displacement of persons, a statement or resolution indicating compliance with this Act must be submitted.

4.11 Intermunicipal Agreements **10.11**

Where two or more municipalities are involved, proposed or executed intermunicipal agreements must be submitted with the application for a Step 2 grant.

Ref.

4.12 Public Input **10.8**

Where continuing public input is necessary, the application package must include a public participation work plan including costs and a schedule of activities (see paragraph 3.9 above).

NOTE: The application and accompanying documents must be reviewed and approved by both the State agency and EPA. DO NOT proceed with any work on the project until instructions to do so are received. Grantees will be notified in writing when a grant is approved and instructions will be provided as to procedures for accepting the grant and executing the Grant Agreement (EPA Form 5700-20).

5.0 Step 2 Plans, Specifications and Estimates

NOTE: A Step 2 grant is awarded to enable the applicant to design the project and otherwise ready it (plans, specifications and estimates) for bidding. Predesign conferences may be required by the State or EPA. At these conferences the responsibilities of each party will be discussed as well as the administrative and technical requirements of the project.

The following is a list of technical and administrative items to be considered during this phase of the project.

5.1 Project Design **12.0**

The project, in addition to being designed in accordance with sound engineering practice, must take into account those engineering and environmental measures recommended in the approved facility plan. Also, incompatible industrial wastes may not be introduced into the municipal system but must be pretreated by the industry. Accordingly, the design may not contemplate the handling of such wastes.

Projects with estimated costs in excess of $10,000,000 must be subjected to a value engineering (VE) analysis.

5.2 Project Specifications **12.1**

The project specifications must comply with all Federal requirements. Provisions to be included in all specifications are furnished by the State or EPA in a preprinted form. Generally, the consulting engineer will be familiar with these provisions.

5.3 Project Cost Estimates **12.1**

The consultant is to prepare detailed construction cost estimates based upon the scope of work as reflected in the project plans and specifications. This estimate is used to judge the reasonableness of the bids received.

Ref.

5.4 Continuing Work ..... **N/A**

While the following items need not be completed until the construction (Step 3) phase of the project is underway, work on them during the design phase should be maintained to insure their timely completion.

a. **Plan of Operation** **12.2**

A plan for the efficient operation and maintenance of the facilities must be developed.

b. **Sewer System Evaluation (SSES)** **10.6**

Where applicable, the SSES must be maintained on schedule to insure corrective sewer rehabilitation will be completed prior to completion of construction.

c. **User Charge Systems** **11.2**

This system may be complex and require substantial time to complete. It must be approved before a Step 3 grant can be awarded.

NOTE: Completed plans, specifications and estimates must be submitted to the State for review and approval prior to being sent to EPA. DO NOT undertake additional project work or advertise for bids until written instructions to do so are received.

Grantees will be notified in writing of plan and specification approval and will be given instructions for applying for a Step 3 grant.

Payments for work completed under the grant are to be requested (using EPA Form SF-271) in accordance with the payment schedule in the Grant Agreement.

6.0 Step 3 Application

NOTE: The following items are required for a Step 3 grant and are to be submitted to the State agency.

6.1 Plans, Specifications and Estimates **12.0**

Approved plans, specifications and estimates suitable for bidding, as described under Step 2, must be included. If the plans, specifications and estimates have previously been approved by EPA, submit only a copy of the approval letter. No Step 3 grant awarded after November 15, 1981, may include assistance for the cost of constructing capacity to treat, store or convey industrial wastewater from large dischargers, unless a Step 2 grant was awarded prior to May 15, 1980.

6.2 Application, EPA Form 5700-32 ..... **9.2**

Each item should be completed in accordance with instructions. For Step 3 projects, the site information required in Part II-Section B of the application form is necessary. Also, the source and method of funding the local share of project costs should be clearly explained. A copy of the resolution authorizing the official representative (Mayor, Councilman, etc.) to act on behalf of the applicant must be included.

Ref.

6.3 Selection of Professional Engineer **9.3**

Copies of proposed contracts, or explanation of how contracts for professional services will be awarded, must be included. MBE and WBE goals must be considered.

6.4 Intermunicipal Agreements **10.11**

Where two or more municipalities are involved, final executed agreements (if not previously submitted and approved) must be submitted with the Step 3 application.

6.5 Municipal Pretreatment Program **10.4**

Where industrial pretreatment is required, no Step 3 grant may be made after December 31, 1980 unless a municipal pretreatment program has been developed and approved.

6.6 Public Input **10.8**

Where continuing public input is necessary, the application package must include a public participation work plan including costs and a schedule of activities (see paragraph 3.9 above).

6.7 Assurances ..... **N/A**

In addition to the assurances contained in Part V of the application, additional assurances as described below are necessary when applying for a Step 3 grant. Some of the assurances may not be applicable to a particular project.

a. **Flood Disaster Protection Act of 1973** **12.1.5**
For projects which include structures to be located in a flood hazard area delineated by the Department of Housing and Urban Development, grantees must participate in the flood insurance program.

b. **Sewer Use Ordinance** **11.4**
A copy of existing sewer use ordinances, or a letter assuring that such ordinances will be enacted, must be included. The ordinances must require new connections to be free from storm water flows.

c. **Plan of Operation Schedule** **12.2**
A schedule for readying the facility for operation (staffing, training, purchase of chemicals, etc.) must be included.

d. **Sewer System Rehabilitation Scheduling** **10.5**
If the sewers leak excessively and it is determined that the leakage can be corrected by rehabilitating the sewers, a construction schedule for the rehabilitation work must be included.

Ref.

6.8 Payment Schedule **12.3**

A realistic grant payment schedule is to be submitted with the application.

NOTE: The application and accompanying documents must be reviewed and approved by both the State and EPA. DO NOT advertise for bids nor proceed with any additional project work until written instructions to do so are received. Grantees will be notified in writing of a grant offer and instructions will be provided for acceptance of the grant and execution of the Grant Agreement (EPA Form 5700-20).

7.0 Step 3 Construction

NOTE: The primary activity of the Step 3 phase is the construction of the approved project. To insure that the project is properly constructed, financed, operated and maintained, will involve the grantee in numerous activities. Important among them are the following:

7.1 Advertising for Bids **13.1**

Only after receiving the Step 3 award may grantees advertise for bids.

7.2 Receipt and Review of Bids **13.2**

Grantees must receive, review and tabulate the bids and submit copies of bid material and recommendations for award to the State agency for approval. *DO NOT* award contracts prior to receipt of authorization to do so from the State or EPA.

7.3 Changes in Grant Amount **13.3**

Depending on the price of the lowest acceptable bid, the grant may need to be increased or decreased. The State must approve and certify all grantee requests for increases before they may be considered by EPA.

7.4 Protests **13.4**

If any contractor or equipment supplier lodges a protest against the bidding procedures, grantees must attempt to resolve the protest using advice from their legal counsel. Also, grantees must notify the State and EPA of each protest and how it was resolved.

7.5 Award of Construction Contracts **13.5**

After the bids have been reviewed and approved by the State or EPA and *after* having received authorization to do so, construction contracts are to be awarded.

Ref.

7.6 Preconstruction Conference **13.6**

A preconstruction conference is to be held to discuss the responsibilities of all participants, including the grantee, the grantee's consultant, the contractors, the State and EPA.

7.7 Construction Schedule ..... **N/A**

Prior to starting construction, the contractor must furnish the grantee and State or EPA with a detailed construction schedule. Expected progress during construction should be discussed at the preconstruction conference (7.6). The schedule should be altered when required and will be the basis for making federal progress payments under the grant (7.10).

7.8 Change Orders **13.7**

During construction it may be necessary to modify the project. Changes to the construction contract are generally made by the use of change orders which must be approved by the State and EPA.

7.9 On-Site Inspection **13.8**

The State, EPA or Army Corps of Engineers in accordance with an interagency agreement with EPA, will periodically make on-site inspections to monitor construction procedures and to review project related documents.

7.10 Grant Payments **13.9**

Grant payments are to be made in accordance with the payment schedule, updated when work is begun and set forth in the grant agreement. However, payments may not exceed 50%, 80% or 90% of the grant amount until certain program requirements are fulfilled. These include the development of a plan of operation, sewer use ordinance, sewer system rehabilitation, etc.

7.11 Audits **13.10**

Records and documents of the project must be maintained as they are subject to an audit by EPA to substantiate project expenditures.

NOTE: Other program elements are covered in 14.0 and 15.0.

Part II
Explanation of items summarized in Part I

8.0 Preapplication Information

8.1 Applicant Eligibility

An eligible applicant is: "a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created under State law, or an Indian tribe or an authorized Indian tribal organization, having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under Section 208 of the Act." This definition excludes a special district, such as a school or park district, which does not have as one of its principal responsibilities the treatment, transport, or disposal of liquid wastes.

8.2 Type of Projects

The types of projects eligible for a 75% Federal grant include sewage treatment plants, interceptor and outfall sewers, trunk and collection sewers, and overflow control facilities for combined sewer systems. It is the policy of EPA and the States to consider the construction of treatment facilities and needed interceptor sewers as more urgent than the other types of projects.

In addition new, expanded or rehabilitated on-site systems such as septic tanks or other subsurface disposal systems, which serve principal residences, small commercial establishments (less than 25,000 gpd) or clusters of households, may be eligible to receive 85% Federal grants. These systems as well as certain other types of systems are defined as "alternative technology" projects and may be eligible for an 85% Federal grant. For small communities with a population under 3,500 or sparsely populated areas of larger municipalities with a population under 3,500, alternative technology collection systems employing 6 inch diameter or smaller gravity sewers, pressure or vacuum sewers may also be eligible for 85% Federal grants. The principal residences or small commercial establishments must have been constructed and inhabited before

December 27, 1977 to be eligible for the additional grant funds. (See article 3.4 Innovative and Alternative Technology for a more complete description).

To be eligible for a Federal grant, the project must have as its principal purpose the treatment of domestic wastes from an entire community or region. Therefore, treatment facilities for power plants, airports, mass transportation or drinking water plants are *not* eligible for funding under EPA's Construction Grant Program.

8.3 Priority List

Each year the States are apportioned sums of money (allotment or allocation) for construction grants. Grants from these funds are made directly by EPA for those projects which the State determines are entitled to priority for a grant over other eligible projects in the State. The State system of determining priority of projects must give consideration to:

a. the severity of pollution problems;
b. the existing population affected;
c. the need for preservation of high quality waters;
d. total funds available;
e. any additional factors considered pertinent by the State.

Each project which is to receive a grant must be certified by the State as entitled to priority for such grant over other projects in the State. Only projects so certified by the State may receive a construction grant.

States are required to set aside portions of their funds to be used exclusively for (a) small communities with population under 3,500 (where rural population of the State is 25% or more), (b) innovative and alternative technology projects, and (c) funding grant increases. Also, States may give higher priority to innovative/alternative projects or to malfunctioning I&A projects for which 100% grants can be given to cover replacement costs.

States will provide interested persons with information concerning their priority systems as well as details on the ranking of particular projects. Priority lists must be subject to a public hearing at which time communities, concerned with the funding of a project, may make their interests known.

8.4 Three Step Construction Grant Process

Under EPA's Construction Grant Program, projects are funded in three steps, namely:

Step 1—Grant for planning and preliminary design ("facilities planning")
Step 2—Grant for plans, specifications and estimates
Step 3—Grant for construction

A single grant may be made for both the design *and* construction of a project—a combination Step 2 plus Step 3 grant for communities of 25,000 population or less if the total estimated cost of construction is less than $4 million ($5 million or less in States with unusually high construction costs). This provision of the law is designed to reduce the amount of paperwork necessary for smaller communities and should be discussed with the State agency by qualifying communities.

8.5 Water Quality Management Plans

The law requires each State to study the pollution problems within its boundaries and develop a logical approach for reducing or eliminating this pollution. The first step is to determine the quality to be achieved by each body of water within the State, i.e., to establish "water quality standards." The second step is to determine the level of treatment for each discharge into the receiving body of water (waste load allocation) to achieve water quality standards.

If it is found that through secondary treatment (which removes about 85% of the pollutants) water quality standards for each discharge can be met, grant applicants need only build secondary treatment facilities. If water quality standards cannot be met with secondary treatment, dischargers must provide higher levels of treatment (advanced waste treatment).

In areas of urban-industrial concentrations, or other areas with complex water quality problems, "Areawide Waste Treatment Management Plans" (sometimes referred to as "208 Plans") may be prepared by the State or an agency designated by the Governor. These plans identify alternative solutions for both point source and non-point source (run off from farm land, mining operations, etc.) discharges in their areas.

It is important for applicants to know that their projects must be in agreement with approved 208 or WQM plans. These plans will designate local agencies which can apply for construction grants, establish population forecasts for the areas involved, and provide other information helpful to applicants. Potential applicants should first contact their State agency to determine if their proposed project is located in an areawide waste treatment management planning area.

8.6 Facilities Planning

Preparation of a facilities plan is the first major step of the three step construction grants process. Through the plan, specific recommendations for the treatment plant site, size, type of process, method of effluent and sludge disposal, interceptor sewer routing, etc. necessary for constructing the project are developed.

Ideally, the Water Quality Management plan (item 8.5 above) sets forth the level of the treatment necessary for each sewage treatment facility in the planning area and the implementing agency prepares a facilities plan to develop a specific project which is cost effective and environmentally sound. The State agency will designate the boundaries of the facilities planning area in cases where they have not been designated by areawide waste treatment management plans. When the boundaries encompass more than one political jurisdiction, service agreements or other contractual arrangements are necessary between jurisdictions. Negotiations must begin early to assure the timely completion of the project.

Cases will arise in which facilities planning areas and areawide waste treatment management planning areas overlap. Coordination and cooperation are essential to avoid duplication.

Later items in this handbook describe specific topics of a facilities plan in more detail. Further information is provided in the EPA publication, *Guidance For Preparing A Facility Plan.*

8.7 Municipal NPDES Permits

The permit system used by EPA officials to enforce the meeting of water quality standards is entitled the National Pollution Discharge Elimination System (NPDES). NPDES permits issued under the system are applicable to all municipal discharges and the municipalities must comply with their provisions. Where Water Quality Management or facilities plans have been established, the permits will require compliance with such plans.

NPDES permits may contain limitations, conditions or schedules which will require the municipality to undertake the construction of a wastewater treatment facility.

8.8 Clearinghouse(s)

Applicants for construction grants for wastewater treatment facilities are required to comply with the Office of Management and Budget (OMB) Project Notification and Review System (Circular A-95). This system is established to provide for early contact between applicants and governmental agencies and to insure coordination between related projects.

Prior to submission of a Step 1 grant application, and after the completion of a draft facilities plan, applicants are required to obtain comments from the State and/or regional clearinghouse(s). The applicant is to include copies of these comments with the application package. If the comments are adverse, the applicant is to submit a statement explaining how the comments were considered.

9.0 Step 1 Application

9.1 Plan of Study

A plan of study outlines the work to be done in preparing a facilities plan. It should be brief and generally follow the forms suggested in the "Model Plan of Study," a supplement to the *Guidance For Preparing A Facility Plan.* Unique features of the project which will require special attention, such as water-short areas, recreational areas, economically depressed areas, etc., should be addressed.

The plan of study is developed by the applicant after consulting with the public and reviewed by both the State and EPA to insure compliance with municipal permit conditions, previously approved water quality management plans, interstate agreements and other applicable requirements.

Once approved, the plan of study is incorporated into the grant agreement along with a schedule for the completion of the specific tasks, to be undertaken in the preparation of the facilities plan, and itemized costs for each of these tasks.

9.2 Application, EPA Form 5700-32

The application form contains instructions for its preparation and assurances with which the applicant must comply. The application must be accompanied by a formal resolution of the governing body designating, by name and title (Mayor, City Manager, City Clerk, etc.), the authorized representative to act in behalf of that body in all matters related to the grant process. This person must be an official of the governmental unit rather than the consulting engineer or other professional consultant. The resolution should specifically authorize the representative to make application, submit other documentation as required, accept the grant offer and act for the governing body in all grant related matters. In the event that the representative is replaced, a resolution naming the new representative must be submitted.

9.3 Selection of Professional Engineer

The most common contracts (subagreements) are the engineering contracts between the municipality and the consulting engineer. Detailed requirements and procedures for obtaining all types of professional services including environmentalists, construction managers, etc., are presented in the regulations 40 CFR 35.936 and 35.937 and are available from the State or EPA.

Essentially the regulations require that the need for architectural/engineering (A/E) services be advertised so that qualified firms may offer their services. (This does not apply to communities under 25,000 population.) At least three firms which display acceptable professional qualifications to do the work are requested to submit proposals for the project. Proposals may or may not include costs for professional services. Professional fees are negotiated so that the professional receives a fair and reasonable profit and the municipality obtains competent services at a fair cost.

A cost review is to be conducted by the applicant with costs being presented to EPA in a prescribed form. Additional cost breakdowns may be required by EPA for a particular project to establish reasonableness of the costs.

If the applicant is satisfied with the services of the firm selected to do the Step 1 or Step 2 work, the same firm may be used for additional work, providing the firm has the capability and resources to carry out such work on schedule and a fair fee can be negotiated. Likewise, the grantee may terminate the A/E contract if the contractor fails to perform.

Various types of contracts are acceptable but cost-plus-percentage-of-cost and the percentage-of-construction-cost types of contracts are prohibited. Generally, separate fee negotiations should be conducted for each Step 1, Step 2 and Step 3 grant.

Positive efforts are to be made by each applicant to seek out minority and women-owned businesses and afford them an opportunity to compete for work to be done under the Step 1, 2 or 3 grant. Each EPA regional office has established monetary goals (usually expressed as a

percentage of the grant funds use by a State) to be achieved by minority business enterprises(MBE) and women's business enterprises (WBE) participating in the Construction Grants Program and has developed lists of MBE's and WBE's to provide assistance to applicants in meeting these goals. In addition to MBE and WBE requirements for applicants, each prime contractor (engineers for Step 1 and Step 2 work and construction contractors for Step 3 work) also have MBE and WBE goals which must be satisfied.

All professional services work initiated after June 30, 1975, must be approved in advance by the State agency or EPA in order to be eligible for grant funds. Therefore, it is recommended that applicants contact the State agency or EPA before executing service contracts.

10.0 Step 1 Facilities Planning

10.1 Discharge (Effluent) Limitations

The degree of treatment which must be provided by a particular treatment plant is dictated by the effluent limitations. Effluent limitations are established by the State (or, in some cases, by EPA through the NPDES permit). For example, effluent limitations may require that the plant discharge not over 20 milligrams per liter (mg/l) of biochemical oxygen demand (BOD), 12 mg/l of suspended solids (SS), and a dissolved oxygen of 5.0 mg/l. If the sewage entering the treatment plant has a BOD of 200 mg/l and SS of 240 mg/l, the grantee would be required to provide 90% BOD removal, 95% SS removal and additional oxygen to the effluent before discharge. Effluent limitations will differ according to the nature of the receiving waters; and, they would also differ if the effluent were to be used to recharge groundwater or to be disposed of on land.

10.2 Alternatives

An important aspect of a facilities plan is the investigation and evaluation of various alternative solutions to the water pollution problems. These alternatives will include an evaluation of the existing facilities to determine whether the operation of the existing plant can be improved enough to provide the required level of treatment, thus precluding the need for new construction. If this is not practicable, alternatives such as size, location, type of process, phasing of construction, rehabilitation, etc. must be considered.

Best practical waste treatment technology (BPWTT) must be taken into consideration and includes, as a minimum, an evaluation of the following waste treatment management techniques: (a) biological or physical-chemical treatment and discharge to receiving waters, (b) treatment and reuse/recycling, (c) land application techniques, (d) systems including revenue generating applications (sale of methane gas, irrigation and sale of crops, etc.), and (e) on-site (septic tanks) and nonconventional systems.

For sewers, alternative routings and sizes must be evaluated.

Among the many types of alternatives to be evaluated are innovative and alternative technology processes or techniques as described below in article 10.3.

Initially the most feasible alternatives are identified and, through a preliminary screening process, the best alternatives are selected. These alternatives are then evaluated on the basis of engineering, environmental, cost, public acceptance and ability-to-be-implemented considerations. This process results in the selection of the most cost effective solution. A "no-action" alternative must also be considered. The entire process of evaluating these alternatives must be explained in the grantee's public participation program and described in the facilities plan.

(NOTE: It is important that the full impact of the overall cost of each alternative on the average citizen to be served by the new facility be clearly itemized. Namely, costs such as: the local share of the capital cost; interest on borrowed capital; sinking fund costs; O&M costs; connection charges; etc.)

10.3 Innovative and Alternative Technology

In 1977 Congress authorized a three year program to stimulate evaluation of innovative and alternative (I & A) processes or techniques for wastewater treatment which can reclaim and reuse water, productively recycle wastewater constituents, eliminate the discharge of pollutants, recover or reduce energy, reduce costs or otherwise provide environmental benefits. To encourage I & A evaluations, the law provides Federal grants up to 85% for approved I & A projects. In the unlikely event of failure of an I or A project, the law also provides for grants to pay up to 100% of the cost of modification or replacement. States may give higher priority to I & A or 100% replacement projects.

All facilities plans (Step 1) begun after September 30, 1978 must evaluate I & A projects as part of their alternative solutions (see article 10.2 above). The 85% grants apply only to Step 2, Step 3 or Step 2 plus 3 approved projects. I & A projects differ from conventional forms of treatment and each has its own definition. Alternative technology projects are proven methods of treatment and include land application of effluents or sludges, aquifer recharge, revegetation of disturbed lands, anaerobic digestion with 90% methane recovery, codisposal with refuse, self-sustaining incineration, and on-site systems, to name just a few. Innovative projects on the other hand are processes or techniques which are not fully proven (some risk) but offer some definite benefits. Proposed innovative projects must meet one of the following six criteria: (a) 15% life cycle cost reduction, (b) 20% net primary energy reduction, (c) improved operational reliability, (d) better management of toxic materials, (e) increased environmental benefits, (f) new or improved methods of joint municipal and industrial treatment.

Both alternative technology projects or conventional forms of treatment are candidates for innovative designation although

conventional concepts of treatment must meet either (a) or (b) of the criteria above. Innovative or alternative projects may be 15% more costly than non-innovative projects and still be considered cost effective. The 85% Federal grant is applicable to I & A projects or portions of a project using innovative or alternative techniques.

10.4 Municipal Pretreatment Program

Where a municipal treatment works will treat both municipal and industrial wastes, it may be necessary to develop a pretreatment program to insure that objectionable industrial wastes are adequately pretreated before being discharged into the municipal system. The pretreatment program will require an industrial survey, a legal means of controlling and enforcing industrial discharges, an evaluation of the costs to carry out the program, a determination of the technical information needed to carry out the program, and the development of an enforcement monitoring program—which will identify required monitoring equipment, and determine toxic tolerances and pollutant removals in the treatment system.

The development of a pretreatment program can be both time consuming and expensive. Therefore, it would be to the grantee's advantage to establish lines of communication with all the affected industries and seek their cooperation and help. Portions of the pretreatment program must be completed in order to qualify for a Step 2 grant after June 30, 1980. The entire pretreatment program must be completed to qualify for a Step 3 grant after December 31, 1980.

10.5 Infiltration/Inflow (I/I) Analysis

For projects which have existing sewers, it is necessary to prepare an infiltration/inflow (I/I) analysis as a part of the facilities plan. Infiltration is groundwater which leaks into the sewers, whereas inflow is storm water which enters the sewers. The distinction is made between the two types of flows because infiltration is more constant depending on the groundwater level, while inflow is more of a peaking phenomenon related to above ground precipitation. Inflow occurs at distinct points and may therefore be economical to correct. Infiltration is more generally distributed (if one joint in an old pipe has deteriorated and is leaking, other joints in the same reach of pipe may also be leaking) and may be quite costly to correct.

The I/I analysis must quantify the infiltration and inflow and estimate how much it would cost to remove part or all of the I/I from the system. Also, the cost of transporting and treating the I/I must be estimated and the most economical combination between I/I removal or treatment must be determined. Since infiltration and inflow take up valuable capacity in the sewer pipes, pumping stations and treatment plants, it is generally economical to remove some of these excessive flows. Therefore, in the I/I analysis, a preliminary determination must be made of the amount of I/I to be removed and the amount to remain in the system. The amount of I/I which may be economically removed is designated "excessive".

If the amount of excessive I/I is great, it will be necessary to more accurately estimate the cost of removal by performing a sewer system evaluation survey. *DO NOT* proceed with a sewer system evaluation survey until receiving authorization to do so from EPA.

(NOTE: Recent findings have indicated that the amount of infiltration which can be successfully removed by currently available sewer rehabilitation techniques is considerably less than had been assumed in the past. *New guidance on I/I analyses and sewer system evaluation surveys is being developed and will be issued soon.)*

10.6 Sewer System Evaluation Survey (SSES)

A survey is the second step in the sewer system evaluation and is conducted only if the infiltration/inflow analysis concludes that excessive infiltration/inflow exists. Grant funds for conducting a sewer system evaluation survey may be obtained by requesting an increase in the Step 1 grant.

Cost of rehabilitation of sewers is eligible for grant participation. However, some States, due to allotment constraints and other high priority needs, do not certify sewer system rehabilitation projects for grants.

Sewer System Evaluation and Rehabilitation is the subject of an EPA handbook (MCD-19) dated March, 1974. Generally, the evaluation consists of some or all of the following: (a) a physical survey of the system; (b) smoke bomb, air pressure testing or rainfall simulation by flooding sections of storm sewers; (c) selected sewer system cleaning; (d) visual (e.g., television) inspection of selected sewer sections; and (e) the preparation of a report of needed rehabilitation of the sewers.

Generally, grantees would not inspect the entire sewer system using TV cameras. TV inspection is very expensive and must be justified to obtain Federal funding.

The evaluation survey will identify specific sections of the sewer system which are to be rehabilitated—grouted, sealed, lined, replaced or otherwise repaired. Rehabilitation carried out under contract is subject to the same requirements as other construction contracts or subagreements. No more than 80% payment of the Step 3 grant may be made unless the grantee is complying with the sewer system evaluation and rehabilitation schedule.

10.7 Environmental Evaluation

The National Environmental Policy Act of 1969 (NEPA) requires all Federal agencies to prepare environmental impact statements (EIS) for projects which have significant adverse environmental effects or environmental impacts which are likely to be highly controversial. Therefore, to allow EPA to decide if an EIS is to be prepared, grantees are required to prepare an environmental information document (EID), as a part of the facilities plan, which includes an environmental

inventory, an evaluation of the alternatives and proposed mitigative measures. The EID is similar in content to an EIS and is required for all projects.

If, after reviewing the completed facilities plan (which contains an environmental evaluation), EPA decides that the proposed project does not warrant the preparation of an environmental impact statement, EPA will issue a "finding of no significant impact" (FNSI) and make appropriate public notices. On the other hand, if EPA decides that an EIS is warranted, a "notice of intent" will be issued and made public. EPA will then prepare a draft EIS extracting as much information as possible from the EID.

A variation of this procedure is used for those projects which are known in advance to have significant or controversial environmental impacts. In such cases and with all parties agreeing, a facilities plan and an environmental impact statement will be prepared simultaneously. This procedure, known as "piggybacking," is intended to save time and money yet satisfy all the requirements of the Construction Grants Program.

10.8 Public Input

Issues involved in solving water quality problems and in the expenditure of large Federal sums are often sensitive and may come under attack from varied interests. Although the primary responsibility for water pollution control and abatement rests in governmental agencies, public involvement in the decisions and implementation is necessary and desirable. The intent of public participation is to foster a spirit of openness and a sense of mutual trust between the public and governmental agencies and to give the public a role in decision-making efforts to restore and maintain the integrity of the Nation's waters.

Public participation should begin as early as possible in the development of a project, with at least one public meeting being held during the development of the plan of study (see item 9.1 above). Two types of public participation programs are described in EPA regulations—basic and full scale. The basic program consists of conducting several meetings during the project, providing appropriate notices (newspaper, radio, TV ads or newsletters), preparing fact sheets or other information, and otherwise seeking public involvement. The full scale program not only includes the requirements of a basic program but, in addition, requires the formation of an advisory group, the hiring or designation of a public participation coordinator and additional public meetings. Full scale programs are required for all projects for which an EIS will be written, projects involving advanced waste treatment (treatment beyond minimum levels) or where public controversy or interest warrants such a program.

A summary of the public participation program must be included with each facilities plan. Applicants should take note of these requirements and include the costs and time allocation in their Step 1 grant application. Under certain circumstances (minor expansion of a treatment plant, for example) EPA may waive these requirements.

10.9 Historical and Archaeological Investigations

To comply with the requirements of the National Historic Preservation Act of 1966, Executive Order 11593, and other applicable State and Federal laws, it is necessary that an investigation be made of the impacts a project may have on historical or archaeological sites. These investigations may vary from literature searches to field surveys. The initial step, once the project scope is determined, is to contact the State Historical Preservation Officer (SHPO) to obtain specific advice as to the extent of investigations necessary.

The SHPO may recommend that qualified professionals be hired for "walk-through" or "windshield" preliminary investigations. The reasonable costs for these investigations are eligible for grant participation, but EPA must be advised at each successive stage before additional costs are incurred.

10.10 Selected Alternative

After all investigations and alternatives are evaluated as part of the facilities planning, one alternative is selected and described in greater detail. The selected plan describes the project for which Step 2 detailed design and Step 3 construction grants may be requested by the applicant. The depth of detail used to describe the selected plan will vary with the size and complexity of the project. *The amount of detail should be discussed with and agreed upon by the State and EPA before completing the facilities plan.*

Cost estimates of the selected plan must be carefully developed and are to be used in completing the application (EPA Form 5700-32) for a Step 2 grant.

10.11 Intermunicipal Agreements

If a project involves more than one political jurisdiction, it will be necessary to work out service agreements. These agreements will include financial arrangements and require each jurisdiction to enforce the requirements for user charges, sewer system rehabilitation, industrial cost recovery, sewer use ordinances, etc. The details of the service agreements will vary from project to project. Because the time required to complete service agreements can be long, action on them should be initiated as early as possible during the preparation of the facilities plan. Service agreements must be drafted prior to approval of the facilities plan and possibly executed before the award of a Step 2 grant.

If wastes from a Federal facility to be treated in a proposed municipal waste treatment plant make up more than 5% of the design flow or total more than 250,000 gallons per day, EPA cannot participate in the construction costs attributable to such wastes.

11.0 Step 2 Application

11.1 Value Engineering

Where construction costs are expected to exceed $10.0 million, a value engineering (VE) analysis of the project's design is required. In a VE analysis the project is evaluated component by component to determine the least costly way of constructing the project without sacrificing quality. To insure an objective analysis, the VE analysis is generally performed by a different firm from the original design engineering firm—although some larger engineering firms have in-house capabilities for this specialized work.

EPA's experience has demonstrated that a VE analysis can result in substantial construction cost savings. Engineering services for the VE analysis are procured in the same manner as the architect/engineer services (see article 9.3) and the costs for the VE analysis should be included in the Step 2 application.

11.2 User Charges

User charges are fees paid by users of the facilities to cover the operation and maintenance—including equipment replacement costs of the system. Industrial, commercial and residential users are charged a proportionate fee based on the wastewater treatment service provided. In determining the user charge to each class of users the grantee may use a system based on the actual use of treatment services (including volume and strength of wastes) or, under certain circumstances, on the use of "ad valorem" taxes. User charge systems are also required for projects involving on-site (septic tank) disposal systems.

At the time of a Step 2 grant application, applicants must submit a plan and schedule for preparing a user charge system and for obtaining input from the public. After June 30, 1979, a Step 3 grant may not be awarded unless EPA has approved the user charge system. By the time the project is completed and ready to operate, the approved user charge system must be enacted.

11.3 Treatment of Industrial Wastewater

After November 15, 1981, no Step 3 grant may be awarded which includes assistance for the construction of capacity to treat, store or convey industrial wastewater from large industrial users (i.e., those industries discharging more than the equivalent, in flow or pollutant loading, of 50,000 gallons per day of domestic wastewater), unless a Step 2 grant was awarded prior to May 15, 1980. Therefore, when a municipal treatment plant will treat both municipal and industrial wastes, an applicant receiving a grant after these dates must identify and separate out the cost of that portion of its wastewater treatment system's capacity to be constructed to accommodate large industries as that cost is ineligible for grant funds.

11.4 Sewer Use Ordinance

Applicants for a Step 2 or Step 3 grant must submit a current sewer use ordinance or evidence that it will enact and enforce such an ordinance. The sewer use ordinance must prohibit new sources of inflow (illegal connections from sump pumps, foundation drains, roof leaders, etc.) from being connected to the sewer system and require proper design and construction techniques for new connections. No more than 80% payment of the Step 3 grant may be made until the ordinance is approved by EPA.

11.5 The Uniform Relocation and Land Acquisition Policies Act of 1970

Projects which entail the acquisition of private property or the displacement of persons are subject to the provisions of the Uniform Relocation and Land Acquisition Policies Act of 1970 (40 CFR Part 4 addresses these requirements). Basically, the Act establishes procedures for equitable settlement in such cases. Although the actual cost of land purchased for the project is generally *not* eligible for grant participation (except in certain cases when the land is an integral part of the treatment process), certain costs associated with complying with this Act may be eligible. The Step 2 grant application must include a statement or resolution assuring that the grantee will comply with the applicable provisions of this Act and a time schedule of compliance. Before starting Step 3 construction, the grantee must have purchased all necessary land for the project.

12.0 Step 2 Plans, Specifications and Estimates

12.1 Project Specifications

The end product of the Step 2 detailed design is a set of plans (drawings), specifications and detailed construction cost estimates which are suitable for bidding and construction purposes. Since large sums of public funds will be spent on constructing the project, it is of the utmost importance that the plans, specifications and estimates be as complete and accurate as possible. Plans, specifications and estimates must be submitted to obtain the final Step 2 grant payment and approved plans and specifications must be submitted to obtain a Step 3 grant.

The provisions of many Federal, State and local laws must be satisfied when advertising for and constructing public works projects. To assist grantees in satisfying most of these requirements, EPA has prepared a standard set of inserts which may be included in the construction contract. Key elements of the Federal requirements to be included in the contract documents are highlighted below.

12.1.1 Contract Documents

The contract documents must contain the following six items:

- a statement of work, including drawings and specifications, and a required time-for-completion schedule;
- the terms and conditions of the construction contracts;
- an explanation of method of bidding, method of evaluating bid prices and the basis upon which award of the contract will be made;
- the criteria for evaluating bidders;
- a statement indicating that the project is partially funded with Federal money but that the government is not a party to the contract;
- copies of 40 CFR 35.936, 35.938, 35.939 and 43 FR pp. 60220-60224.

12.1.2 Supplemental General Provisions of Specifications

The requirement for supplemental general provisions in the specifications is satisfied by including Appendix C-2 of 40 CFR Part 35 in the specifications. This appendix includes conditions relating to subjects such as:

- audit and access to records;
- price reduction for defective cost or pricing data;
- contract work hours and safety standards;
- equal employment opportunity;
- utilization of small and minority business;
- a covenant against contingency fees;
- anti-kickback regulations;
- gratuities;
- patents;
- copyrights and rights in data;
- a clean air and water clause.

12.1.3 Equal Employment Opportunity

The Equal Employment Opportunity (EEO) provisions of the law must be followed and made a part of the specifications where contracts are greater than $10,000. In areas having an approved home-town or an imposed plan, the contract specifications must contain the specific provisions of the plan as published by the Secretary of Labor in the Federal Register. Home-town plans are agreements reached between the local contractors, trade unions, minority groups and governmental agencies which are approved by the Secretary of Labor and include the goals for hiring and training of minority groups. In such cases all contractors must agree to abide by the provisions of the plan.

In non-home-town plan areas, contractors will be required to comply with the provision of Executive Order 11246 and engage in affirmative action directed at promoting and insuring EEO in their work force.

In addition to the above requirements, the plans and specifications must include a statement of MBE and WBE goals for utilization of minority and women's business enterprises and a statement of how MBE and WBE policy is to be implemented.

Regional Offices will provide specific instructions to grantees regarding EEO, MBE and WBE requirements affecting their projects.

12.1.4 Davis Bacon Act

Construction contracts in excess of $2,000 are subject to the provisions of the Davis-Bacon Act. This Act requires that contractors pay employees minimum wage rates as established by the Department of Labor. These rates are specified in Wage Determinations issued for specific projects and reflect prevailing wages paid workmen in various crafts in a given locality. Area of General Wage Determinations, applicable to projects in larger metropolitan areas, are published periodically in the Federal Register. Wage Determinations are valid for 120 days and, along with any pertinent modifications, must be included in the bidding and contract documents.

12.1.5 Flood Disaster Protection Act of 1973

If the proposed project includes structures with a value of more than $10,000 which will be located in an area formally designated as a flood hazard area by the Department of Housing and Urban Development (DHUD), those structures must be insured under the flood insurance program administered by DHUD. In this instance, "structure" generally refers to a "building" having four walls and a roof. Such insurance, if required, must be maintained during both construction and the useful life of the structure.

Other provisions of this Act may be applicable to certain projects and should be taken into consideration during the preparation of the facilities plan.

12.1.6 Bonding/Insurance

For construction contracts in excess of $100,000 the following minimum bonding and insurance requirements must be a part of the specifications:

- 5% bid bond;
- 100% performance bond and 100% payment bond;
- fire and extended coverage, workmen's compensation, public liability and property damage and "all risk" insurance as required by local or State law;
- flood insurance, as required, during and after construction.

For contracts less than $100,000, bonding and insurance requirements shall be in accordance with local or State practice.

12.1.7 Technical Provisions of Specifications

The following are among the items which must be addressed in the plans and specifications for the project.

Safety Precautions: Occupation Safety and Health Act (OSHA) and applicable State and local requirements must be complied with.

Mitigative Measures: Mitigative measures required by the environmental evaluation or impact statement must be complied with. Examples might be soil erosion control, hours of operation, backfilling and seeding, structural design for buildings in a flood plain, etc.

Bypassing: Bypassing of flows during construction must be prevented where possible.

Reliability and Flexibility: Proposed facilities are to be reliable and provide for flexibility in operation. This may be accomplished by providing for standby power, ample pumping capacity to insure continuous operation when the largest pump is out of service, etc.

Component Identification: Equipment, piping, switches, instruments, etc. must be clearly marked for ease of identification.

Public Water Supply: Public water supplies must be protected by adequate backflow prevention devices (double check valves, air gap, etc.).

Chemical Storage: Chemicals must be properly stored in a curbed area large enough to hold the entire volume in the event of an accidental spill. Also, adequate safety protection gear must be provided for plant personnel.

Ventilation: Adequate ventilation must be provided in all areas where necessary (for example, wet well, dry well, chlorine room, chemical storage area, etc.).

Laboratory Facilities: Laboratory facilities must be sufficient to give the plant operator control over the operational efficiency of the treatment plant. Additionally, facilities must be adequate to conduct sampling and testing as required by the NPDES permit or the State agency.

Emergency Alarms: Adequate alarms must be provided to warn of failures or dangers.

Use of Mercury: Mercury may not be used for trickling filter seals. Other uses of mercury require special review and approval.

Sewers: Sewers must be tested for infiltration. They must maintain minimum scouring velocity and have adequate capacity during peak flow periods.

Equipment: Except where based upon performance specifications, at least two trade names must be specified for all major items of equipment with preference given to American manufactured products.

Operation & Maintenance: In selecting equipment and components, the consultant should give careful consideration to those which can be operated and maintained with the least effort.

Pretreatment: Industrial wastes which are not compatible with household wastes handled by the municipal treatment plant must be pretreated in accordance with an approved municipal pretreatment program.

12.2 Plan of Operation

A Plan of Operation which is required for all treatment facilities, is a document containing an orderly listing of actions needed to be taken during construction to ready the plant and its personnel for operation once construction has been completed. Matters such as staff recruiting, selection and training, operation and maintenance procedures, reports, laboratory testing, special equipment handling, start up procedures, etc. must be considered in the plan.

The Operation and Maintenance Manual (prepared in conjunction with the plan of operation) is especially important since it provides plant personnel with detailed instructions for assuring efficient operation and proper maintenance of all plant components (including off-site pump stations, etc.). This manual should discuss, in clear, easy-to-follow terms, how the facility is to be operated so as to meet effluent standards contained in the NPDES permit and other State and Federal requirements. Grant payments are limited to 50% of the Federal share of Step 3 costs until the draft manual or evidence of its timely completion is submitted. No more than 90% of the grant may be paid until the manual is approved.

12.3 Payment Schedule

For each of the three "step" grants it is necessary to prepare a payment schedule for disbursement of grant funds. This is particularly important for the Step 3 construction project since this is where most of the monies are spent. Payment schedules for all projects are used to project the cash-flow requirements for EPA as well as the borrowing needs of the Federal government. Since these schedules establish the maximum amount of grant funds to be paid out during the specific period and are tied into Federal quotas for budget management purposes, it is important that they be prepared with care.

Once a payment schedule is established, any change will require the written approval of EPA. Payment procedures are explained in the section *Grant Payments* (13.9).

13.0 Step 3 Construction

13.1 Advertising for Bids

Grantees must not advertise for bids until authorization to do so is received from the State or EPA. When authorization is received, grantees must advertise the proposed project as widely as possible in order to get the best possible price. Preference for local contractors shall not be shown. Generally, advertisements are to be placed in newspapers, journals or other public notification and solicitation periodicals. If the estimated project cost is more than $10 million, advertisements for bids should be in journals having nationwide circulation. The advertisement must indicate where copies of the bidding documents, including the plans and specifications, may be obtained. Generally, at least 30 days is allowed for receipt of bids. The regulations, 40 CFR 35.938-4, which are included in the project specifications, contain additional specific requirements for advertising. These same bidding requirements also apply to sewer system rehabilitation work where necessary.

13.2 Receipt and Review of Bids

Sealed bids must be received and opened publicly. The grantee, in reviewing them, must insure that all legal requirements are met and prepare a recommendation for award. Bid documents and the grantee's recommendation for award are forwarded to the State for approval. *DO NOT* award construction contracts until approval to do so is received. As a minimum, the following documents are to be submitted after bids are received:

a. a certified bid tabulation of all bids received;

b. two copies of the proposal form and bonds from the apparent low bidder;

c. a statement from the grantee (authorized official) indicating the names of the bidders to whom contracts are to be awarded and the amount of the contracts;

d. proof of advertising indicating the circulation and time for receipt of bids;

e. a copy of each addendum issued during the bidding period and acknowledgement of receipt by the apparent low bidder;

f. signed copies of the certification by the apparent low bidder regarding compliance with EEO, MBE and WBE requirements;

g. if award is to be made to other than the low bidder, justification indicating why the low bidder is not responsive or responsible;

h. a revised cost estimate as necessary;

i. other documents required to conform with applicable State and local laws and ordinances.

After reviewing the bids, the contracts should be awarded to the lowest responsive, responsible bidder. If there is reason to award a contract to other than the lowest bidder, advice should be obtained from legal

counsel concerning such action. In addition, a full explanation, including the legal opinion, must be submitted to EPA for review. *DO NOT award contracts until authorization to do so is received from the State agency or EPA.*

Grantees are cautioned that rejection of all bids and readvertisement of the project may be done only for good cause and with prior approval of the State agency or EPA.

13.3 Changes in Grant Amount

Grants may be increased or decreased at any point throughout the entire three-step process where such action is warranted and justified. Grant changes require State approval and certification and the processing of a Grant Amendment. To minimize grant increases and decreases, each Step 3 grant may include an allowance for contingencies. The amount of the contingency will vary in accordance with the size and type of project and, where applicable, State policy.

Generally, if a grant increase is needed, it occurs because bids were higher than the engineer's estimate. In such cases, bid material must be submitted to the State with the request that the grant be increased. The State is under no obligation to approve the request nor is EPA obliged to increase the grant but will generally do so if the increase is justified and funds are available.

13.4 Protests

The award of construction contracts may result in protests from unsuccessful bidders, equipment suppliers or others. If a protest is received, the procedures outlined in the regulations, 40 CFR 35.939, must be followed. It is the grantees' responsibility to resolve protests. The protest may vary from a protest without merit to the more complex case involving potential litigation.

Advice should be sought from legal counsel whenever protests are lodged. Grantees must advise the State and EPA of a protest, its basis and method of resolution.

13.5 Award of Construction Contracts

After EPA or the State has reviewed the bid information, it will authorize the award of the contracts providing all requirements have been satisfied. Grantees should inform EPA or the State of the date of the contract award or notice to proceed.

At the time of award, a preconstruction conference should be scheduled to insure that each party understands his responsibilities.

13.6 Preconstruction Conference

A preconstruction conference should be held by the grantee with the contractor(s), State agency and EPA participating. The primary objective of the preconstruction conference is to discuss the responsibilities of each party in the project and to clarify any questions. Subjects to be discussed

include: the construction schedule; posting and payment of minimum wages; equal employment opportunities; record keeping; requirements for on-site inspections; timing of invoices and processing of grant payment requests; processing and required approvals of change orders; etc. A separate preconstruction conference may be required by the Federal EEO officer.

13.7 Change Orders

A change order is the method by which construction contracts are modified after work has begun and may result in a cost increase or decrease.

Contracts may need to be modified because of minor errors in the plans and specifications or emergency changes required to protect life or property. Prior approval by the State or EPA of minor or emergency change orders is not required.

Project changes which will substantially alter the design or scope of the project, type of treatment, location, size, capacity or quantity of any major component, or which will require additional Federal funds, must receive prior approval from the State or EPA before being executed. Approved change orders resulting in construction cost increases are ordinarily paid out of the contingency allowance of the project. Where the change order or combination of change orders exceeds the contingency allowance, grantees may request an increase in the grant amount.

Change orders must be justified and are not to be used to circumvent the bidding requirements. The increased costs resulting from a change order must be reasonable and grantees must negotiate with the contractor to insure that the price is fair.

13.8 On-Site Inspection

EPA, the State or the U.S. Army Corps of Engineers (COE) may conduct on-site project inspections to insure that the project is being managed properly, is on schedule, and is being constructed in accordance with approved plans, specifications and change orders. The Army Corps of Engineers is assisting the States and EPA in conducting on-site inspections. Where the COE provides this service, they are acting as agents of EPA.

On-site project inspections are made during construction (interim) and at the completion of construction (final). The frequency of interim inspections will depend upon the size and complexity of the project.

a. *Interim Inspections*—At the time of an interim inspection, the inspector will determine that:

- competent and adequate supervision and inspection is being provided and an appropriate inspector's log is kept;
- approved plans, specifications and change orders are available at the project site;
- construction conforms to approved plans, specifications and change orders, and is on schedule;
- the engineer's estimate of work-in-place agrees with actual observed construction;

- reasonable tests of materials and equipment are being conducted and noted in logs or reports (e.g., slump tests of concrete);
- equipment delivered to the site is being properly protected and stored;
- the required project sign is appropriately displayed;
- a wage rate decision is prominently displayed and agrees with contract documents;
- project accounting records are maintained which distinguish between allowable and nonallowable costs, and are supported by receipts or certified contractor invoices;
- the sewer system rehabilitation (where appropriate) is on schedule;
- special construction techniques or practices are being employed in accordance with the grant agreement;
- the operational staff has been hired and is being trained in accordance with the plan of operation;
- the operation and maintenance manual is being prepared;
- user charge and sewer use ordinances have been prepared;
- wastewater treatment during construction is being provided;
- a procedure is employed to call to the attention of the authorized representative any deficiencies in design or construction.

b. *Final Inspections*—In addition to the items above, the inspector will generally seek to determine that:

- the facilities are complete, operating and, in the case of a treatment plant, will meet the effluent limitations required by the NPDES permit;
- the facilities conform to approved plans, specifications and change orders;
- all equipment is operational and performing satisfactorily;
- appropriate operation and maintenance staff have been hired, trained and are capable of carrying out start-up and operational procedures;
- the laboratory facilities are complete and sufficient to conduct appropriate tests;
- the operation and maintenance manual is readily available and procedures are being followed;
- the accounting records are adequate and are available for audit;
- the user charge system, and sewer use ordinance are completed, approved and ready for implementation.

Deficiencies noted during the inspections must be corrected. Delay in correcting deficiencies may delay grant payments.

13.9 Grant Payments

Grant payments are made in accordance with the payment schedule (see item 12.3) contained in the Grant Agreement. In the case of a Step 3 project, the schedule should be modified at the preconstruction conference to reflect the contractor's latest best estimate. Payment requests may be submitted on the basis of project funds expended (cash) or on the basis of project costs incurred (accruals), and will be submitted on EPA Form SF-271. Supporting documents (vouchers, reports, etc.) may or may not be required depending on the complexities of the work performed and the policies of the State and EPA region in which the project is located. Regional offices will inform grantees of the kind of supporting documents needed for interim grant payments.

Only those allowable costs for which project funds have been expended or for which project costs have been incurred may be considered in determining the amount of a payment.

EPA must limit grant payments to a certain percentage until specific program requirements are satisfied. The grant limitations for Step 3 grant payments are briefly summarized below.

a. *Operation and Maintenance Manual*—No more than 50% of the Federal share may be paid until a draft O&M manual is submitted, and no more than 90% may be paid until the manual is approved.

b. *Sewer Use Ordinance*—No more than 80% of the Federal share may be paid until a sewer use ordinance(s) has been submitted and approved.

c. *Sewer Evaluation and Rehabilitation Program*—In the case of excessive sewer infiltration/inflow, no more than 80% of the Federal share may be paid unless the grantee is complying with the approved sewer system evaluation and rehabilitation schedule.

d. *Municipal Pretreatment Program*—No more than 90% of the Federal share may be paid until the municipal pretreatment program (if applicable) is approved.

e. *Final Inspection*—Final payment may not be made until the final inspection has been completed and EPA has determined that the treatment works has been satisfactorily constructed in accordance with the grant agreement and approved plans and specifications and change orders.

(*NOTE:* For Step 3 grants approved prior to July 1, 1979, no more than 50% of the Federal share may be paid until the grantee has submitted adequate evidence of the timely development of a user charge system; and, no more than 80% until the system is approved. For Step 3 grants awarded after June 30, 1979, the UC systems has to be approved *before* the grant is awarded.)

13.10 Audits

By accepting a Federal grant for a Step 1, 2 or 3 project, grantees agree that their accounts, documents, records and papers, as well as those of subcontractors, will be accessible to EPA, the Comptroller General of the United States, or any authorized representative.

Auditors will review the project's management, accounting procurement and property control records to insure that all costs claimed or incurred are allowable for grant participation. They will also review the project for compliance with all applicable grant provisions and conditions. Grantees will be notified well in advance of the audit so that all pertinent documents may be assembled for the auditor.

14.0 Other Program Elements

14.1 Allowable and Unallowable Costs

Certain costs incurred during the planning, design and construction of wastewater treatment facilities are defined in the law or regulations as being eligible for EPA grant participation. The most obvious of these are the construction costs, except those construction costs associated with treating, storing or conveying industrial wastewater from large industrial users (i.e., those users discharging more than the equivalent, in flow or pollutant loading, of 50,000 gallons per day of domestic wastewater). However, other costs associated with the project may or may not be eligible for EPA grant participation. The item by item listing of these eligible costs would require many pages and is not included here.

Generally, to be eligible for grant participation, project costs must:

a. be necessary to the construction and start-up operation of the sewage treatment facility, reasonable and not a normal expense of municipal administration;

b. be authorized (or not prohibited) and be consistent with Federal, State and local laws and regulations;

c. be consistent with policies and regulations which are applicable to both Federally assisted activities and other activities of the unit of government of which the grantee is a part;

d. not be included in the costs allocable to any other Federally financed program.

14.2 Force Account

Some of the planning, designing or construction of a project may be accomplished by using municipal employees. Generally, however, EPA prefers that the grantee use outside consultants or contractors to accomplish project work. In cases where it is desired to use municipal forces, it will be necessary to obtain the prior written approval of EPA to do so. Applicants wishing to use force account procedures must certify that:

a. municipal employees possess the necessary skills and experience to accomplish the work;

b. the work can be done more economically by the use of municipal employees;

d. emergency conditions dictate that municipal employees be used.

If EPA approves of the force account method, the grantee will be notified in writing of such approval and will be advised as to what records to keep and what administrative costs are eligible for grant participation.

14.3 State Delegation

As a result of the passage of the Clean Water Act Amendments of 1977, P.L. 95-217, a State can enter into a delegation agreement with EPA. Upon approval, up a 2% of its annual allotment, as *authorized* under prevailing legislation, can be used by a State to fund its conduct of the Construction Grants Program. Most States have entered into these agreements and, as they develop the necessary competence, are gradually taking over responsibility for administering the program. The purpose of these agreements is to eliminate the need for grant approvals at the Federal level and, thereby, permit the speedier processing of construction grant applications and conduct of related grant activities.

In agreements which have been signed, grant program responsibilities are phased-in on a gradual basis. That is, initially a State may assume responsibility for such activities as approving plans and specifications and change orders, conducting preconstruction conferences, approving the administrative adequacy of grant applications, etc. Over a period of time, ranging from one to three years, responsibility for the full program is delegated. At that time, all grantee documents, except where prohibited by law, will be given final approval by the State. *Therefore, in those instances in the preceeding paragraphs where both the State and EPA are indicated as the approving authority,* where the function is delegated, final approval is given by the State. EPA is not involved. Grantees will be notified in advance where approval authority is at the State level.

Certain functions cannot be delegated and, therefore, must be retained by EPA. These are (a) the award of grant funds; (b) decisions on the need to prepare an environmental impact statement; (c) decisions on, and enforcement of, civil rights laws, minority and women's business enterprise participation, and equal employment opportunity actions; and (d) resolutions of protests, arising from the award of engineering or construction contracts, and of audit exceptions.

EPA's policy is to delegate to States as much of the day-to-day program responsibilities as possible so as to improve operational effectiveness. Under delegation, EPA monitors each State's efforts to insure that the Construction Grants Program is being carried out in accordance with prescribed laws and regulations and, that grantee matters are being effectively handled.

14.4 Land Treatment

On October 3, 1977 the Administrator of EPA issued a policy statement on "Land Treatment of Municipal Wastewater." This policy statement serves to strengthen and encourage the President's Environmental Message to Congress and reads in part, " . . . the Agency (EPA) will press vigorously for publicly owned treatment works to utilize land treatment processes to reclaim and recycle municipal wastewater." The Congress reinforced this commitment in PL 95-217 by providing additional grant incentives for those projects which utilize innovative or alternative technologies. Land treatment processes are classified as

alternative technology and are therefore eligible for 85% Federal grants (including the cost of land used in the treatment process) provided they are cost effective.

All facilities plans must address innovative and alternative technologies. However, land treatment must be given very serious consideration and, unless substantial reasons exist for not utilizing land treatment, it will be considered as the preferred alternative. EPA has published many technical bulletins which will assist consulting engineers and others in evaluating these techniques. Grantees should be aware of this requirement and work closely with their engineer and the public to insure that an objective evaluation of land application is made. The advantages of these processes and techniques include resource conservation, improved treatment potential, and 10% more Federal funds for the project.

15.0 References

Several types of references are available which can be of assistance to applicants.

To familiarize the applicant with the more commonly used references, the following is presented.

15.1 P.L. 95-217 The Clean Water Act of 1977

P.L. 95-217 and P.L. 96-483 amended P.L. 92-500 the "Federal Water Pollution Control Act of 1972," and made midcourse corrections to the earlier legislation. Grantees may hear references to P.L. 92-500 and should recognize that this law is still in existence but has been slightly changed by subsequent amendments.

The law contains several parts, each of which is called a Title. Title II, "Grants for the Construction of Treatment Works", is the title under which EPA is authorized to award construction grants.

Each title is divided into sections. For example, the requirements for evaluating innovative and alternative wastewater treatment processes are contained in Section 201 of the law. Section 208 establishes the requirement for Areawide Waste Treatment Management.

15.2 Code of Federal Regulations

After laws are enacted, it is often necessary for the administering agency to establish regulations to implement the law. The resulting regulations are published in the Federal Register, become official policy and essentially carry the same weight as the law itself. The many regulations must be categorized and the term applied to each subject area is "Title." (e.g. Title 40 covers the subject "Protection of Environment." Title 12 is "Banks and Banking." Title 22 is "Foreign Relations.")

The titles are divided into Chapters. Chapter I, of Title 40, concerns the Environmental Protection Agency. Each chapter is subdivided into subchapters. Subchapter B concerns "Grants and Other Federal Assistance." The subchapters are subdivided into "Parts." Part 35 concerns "State and Local Assistance." Parts may be divided into

Sections which are grouped into subparts. Subpart E covers "Grants for Construction of Treatment Works—Federal Water Pollution Control Act Amendments of 1972" and encompasses the 35.900 series.

Thus when reference is made to 40 CFR 35.917 it should be understood that the reference is to Title 40 of the Code of Federal Regulations, Part 35, Section 900, paragraph 17, "Facilities Planning" (Step 1).

15.3 Other Publications

Periodically EPA publishes other documents which may be of assistance such as Guidelines or Guidance, Technical Bulletins and Reports, and Research Reports. Most of the publications which will be of assistance to Construction Grants Program grantees are published by the Municipal Construction Division of EPA. Information regarding the subjects and availability of these publications may be obtained by contacting:

General Services Administration (8FFS)
Centralized Mailing List Services
Bldg. 41, Denver Federal Center
Denver, Colorado 80225

Also, EPA has published a "Handbook of Procedures: Construction Grants Program for Municipal Wastewater Treatment Works" for use by State and EPA officials. Copies of these handbooks have been sent to engineering consultants and are available at GSA in Denver on a limited basis to others with responsibilities for construction grants projects.

15.4 Program Requirements Memoranda (PRM)

These are policy clarification and regulation interpretation statements developed and issued by EPA Construction Grants Program Headquarters staff. Copies are available to those who need them through the GSA Denver Office noted in 15.3 above.

Appendix

U.S. Environmental Protection Agency: Region, Administrator & Address

Region 1

William R. Adams, Jr.
Environmental Protection Agency
John F. Kennedy Federal Building
Room 2203
Boston, Massachusetts 02203
617 223-7210
(Maine, N.H., Vt., Mass., R.I., Conn.)

Region 2

Charles S. Warren
Environmental Protection Agency
26 Federal Plaza, Room 1009
New York, New York 10007
212 264-2525
(N.Y., N.J., P.R., V.I.)

Region 3

Jack J. Schramm
Environmental Protection Agency
6th & Walnut Streets
Philadelphia, Pennsylvania 19106
215 597-9814
(Pa., W.Va., Md., Del., D.C., Va.)

Region 4

Rebecca W. Hanmer
Environmental Protection Agency
345 Courtland St., NE
Atlanta, Georgia 30365
404 257-4727
(N.C., S.C., Ky., Tenn., Ga., Ala., Miss., Fla.)

Region 5

John McGuire
Environmental Protection Agency
230 S. Dearborn Street
Chicago, Illinois 60604
312 353-2000
(Mich., Wis., Minn., Ill., Ind., Ohio)

Region 6

Adlene Harrison
Environmental Protection Agency
1201 Elm Street
1st International Building
Dallas, Texas 75270
214 729-2600
(Texas, Okla., Ark., La., N.Mex.)

Region 7

Kathleen Q. Camin
Environmental Protection Agency
324 E. 11th Street
Kansas City, Missouri 64106
816 758-5493
(Kansas, Nebr., Iowa, Mo.)

Region 8

Roger L. Williams
Environmental Protection Agency
1860 Lincoln Street, Suite 900
Denver, Colorado 80203
303 327-3895
(Colo., Mont., Wyo., Utah, N.D., S.D.)

Region 9

Sheila Prindiville, Acting
Environmental Protection Agency
215 Freemont Street
San Francisco, California 94105
415 556-2320
(Calif., Ariz., Nev., Hawaii, T.T. of the Pacific, Guam)

EPA Region 10

Donald P. Dubois
Environmental Protection Agency
1200 6th Avenue
Seattle, Washington 98108
206 399-1220
(Wash., Ore., Idaho, Alaska)

State Water Pollution Control Agencies

EPA Region 1

Connecticut

Merwin Hupfer, Asst. Director
Dept. of Environmental Protection
Room 117, State Office Bldg.
165 Capitol Avenue
Hartford, Connecticut 06115
203-566-2373

Maine

Charles King, Director
Municipal Services
Dept. of Environmental Protection
State Office Building
Augusta, Maine 04333
207-289-3901

Massachusetts

Paul Taurasi, Chief of Engineering
Dept. of Environmental Quality Engineering
110 Tremont Street
Boston, Massachusetts 02108
617-727-3855

New Hampshire

L.M. Collins, Asst. Chief Engineer
NH Water Supply & Pollution Control Commission
Hazen Drive
Concord, New Hampshire 03301
603-271-3503

Rhode Island

James W. Fester, Chief
Division of Water Resources
Dept. of Environmental Management
Room 209, Cannon Bldg.
75 Davis Street
Providence, Rhode Island 02908
401-277-2234

Vermont

Reginald A. LaRosa,
Acting Commissioner
Water Resources Division
Dept. of Water Resources
State Office Building
Montpelier, Vermont 05602
802-828-3361

EPA Region 2

New Jersey

Anthony R. Ricigliano,
Deputy Administrator
Construction Grants
Administration
Dept. of Environmental Protection
Division of Water Resources
Post Office Box CN 029
Trenton, New Jersey 08625
609-292-0950

New York

Ernest Trad, Director
Division of Construction
Management
Dept. of Environmental
Conservation
50 Wolf Road
Albany, New York 12205
518-457-3891

Puerto Rico

Pedro Marrero, Vice Chairman
Air and Water
Environmental Quality Board
P.O. Box 11488
Santurce, Puerto Rico 00910
809-725-8692

Virgin Islands

Pedrito Francois, Director
Div. of Natural Resources
Management
P.O. Box 4340
St. Thomas, Virgin Islands 00801
809-774-6420

EPA Region 3

Delaware

Robert Touhey, Manager
Division of Environmental Control
Dept. of Natural Resources &
Environmental Control
Tatnall Building, P.O. Box 1401
Dover, Delaware 19901
302-678-4761

District of Columbia

John Brink, Chief
Bureau of Air & Water Quality
Control
Dept. of Environmental Services
5010 Overlook Avenue, SW
Washington, DC 20002
202-767-7486

Maryland

Richard B. Sellars, Jr.
Construction Grants & Planning
Programs Administrator
Dept. of Health and Mental
Hygiene
201 W. Preston Street
Baltimore, Maryland 21201
301-383-2761

Pennsylvania

Daniel B. Drawbaugh, Chief
Division of Sewerage & Grants
Dept. of Environmental Resources
P.O. Box 2063
Harrisburg, Pennsylvania 17120
717-787-3481

Virginia

E.R. Simmons, Director
State Water Control Board
Division of Construction Grants
2111 N. Hamilton Street
P.O. Box 11143
Richmond, Virginia 23230
804-257-1017

West Virginia

Warren Means, Branch Head
Municipal Grants Branch
Division of Water Resources
Dept. of Natural Resources
617 Broad Street
Charleston, West Virginia 25301
304-348-0641

EPA Region 4

Alabama

Russell M. Jones
Health Services Administrator
Water Improvement Commission
State Office Building
Montgomery, Alabama 36130
205-277-3630

Florida

Richard W. Smith, Chief
Bureau of Wastewater
Management
and Grants
Dept. of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301
904-488-2582

Mississippi

Scott Armstrong, Chief
Municipal Facilities Section
Air & Water Pollution Control
Commission
P.O. Box 10385
Jackson, Mississippi 39209
601-354-2550

North Carolina

Walter D. Taft, Jr.
205(g) Program Manager
Dept. of Natural Resources
& Community Dev.
P.O. Box 27687
Raleigh, North Carolina 27611
919-733-2504

Georgia

Jack C. Dozier
Municipal Grants Program
Manager
Environmental Protection Div.
Dept. of Natural Resources
270 Washington Street, S.W.
Atlanta, Georgia 30334
404-656-4769

Kentucky

Judson Cramer, Chief
Construction Grants
Dept. for Natural Resources &
Environmental Protection
1065 Highway 127 South
Frankfort, Kentucky 40601
502-564-3410

South Carolina

Roger E. Davis, Director
Domestic Wastewater Division
Dept. of Health & Environmental
Control
2600 Bull Street
Columbia, South Carolina 29201
803-758-5067

Tennessee

D. Elmo Lunn, Director
Div. of Water Quality Control
Dept. of Public Health
621 Cordell Hull Bldg.
Nashville, Tennessee 37210
615-741-6610

EPA Region 5

Illinois

Thomas R. Wallin,
Section Manager
Grants Administration
Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706
217-782-2027

Indiana

Earl Bohner
Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, Indiana 41206
317-633-0167

Michigan

Dick Hinshon, Chief
Grants Administration Section
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P.O. Box 30028
Lansing, Michigan 48909
517-373-0997

Minnesota

Perry T. Beaton, Chief
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Minnesota Pollution Control
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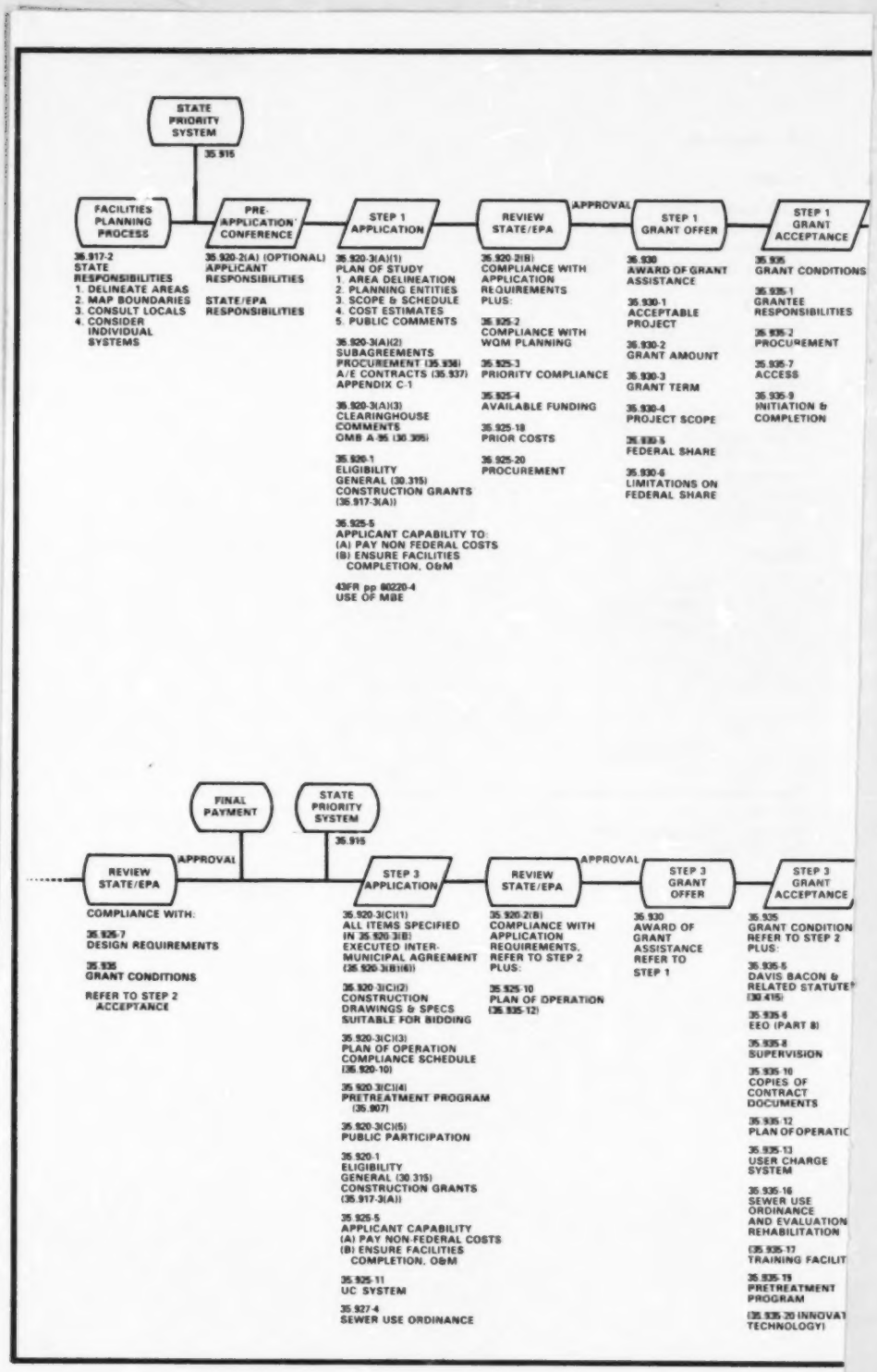
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